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September 13, 2007

Ms. Jennifer Hale  
Weyerhaeuser Company  
P.O. Box 9777  
Mail Stop WTC-2G2  
Federal Way, WA 98063-9777

Subject: 12<sup>th</sup> Street Landfill – Emergency Action  
Status Update Report

Dear Jennifer:

This letter presents activities performed as part of the 12th Street landfill emergency action in Plainwell, Michigan, between September 1 and September 10, 2007. Equipment delivered to the site over this period included the final sheeting for the Portadams, 20,000-gallon storage tank, 200 gpm water treatment system, and off road dump truck.

Safety issues covered during daily meetings included equipment safe zones, water safety, rigging safety, lifting procedures, equipment maintenance, hydraulic operations, heat stress, poison ivy, and general site safety issues.

Field activities performed during this period include the following:

- Completed the pad area for the storage tank and water treatment system.
- Set roll off box in river for secondary water containment. Placed double silt curtains around roll off.
- Placed curtain material on the Portadam structures. Placed continuous line of sandbags along edge of Portadam curtain.
- Placed concrete manhole into channel and placed pump into manhole. Began pumping down channel.
- Once area pumped down, sediments were removed starting at peninsula area and working back toward shoreline. Approximately 600 cubic yards of sediment were removed. Areas of residuals identified near peninsula and in sporadic locations along shoreline. All visual residuals removed and transported to containment pad.
- Sampling stations installed within the river to monitor turbidity were operated throughout the construction activities. The upstream monitoring station was located on the dam side of the small peninsula across the powerhouse channel from the landfill. The downstream monitoring location was approximately 200 feet downstream from the Portadam and 15 feet from the river's edge. Sample results were reviewed several times per day during excavation activities.
- The water quality control performance criterion to trigger corrective responses was a consistently visible plume or reproducible turbidity readings at the downstream station that was 2 times the background water quality. Background readings taken from August 22 to 24, 2007, had levels of 16 to 18 NTUs. However, at start of construction, background turbidities had fallen and ranged from 2 to 4 NTUs. Periodically during the excavation activities, downstream levels exceeding twice the upstream level were identified. The maximum average hourly turbidity reading downstream of the construction area was 15.4 NTUs. As turbidity increases were identified, modifications to construction were performed which included shutting pump down, decreasing pump volume, reconfiguring roll off box with additional dissipation for more uniform flow out of box, and added an additional silt curtain adjacent to roll off to assist in capturing

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resuspended sediment. These actions slowed the emergency excavation activities. Both a tabular summary of turbidity data and a graphical representation of these results are attached to this report.

- Initial removal of sediment in channel was completed on September 10, 2007. Sampling of the channel was performed on September 11, 2007. Pumping of the area will continue to keep static head on Portadams until analytical results are received.
- Bank area was regraded to approximately 3:1 slope. Bank is consistently sand and gravel.

If you have any questions regarding RMT's services, please contact me at 262-879-1212.

Sincerely,

RMT, Inc.



James L. Hutchens  
Sr. Project Manager

cmk/enclosures

cc: Michael Berkoff, USEPA  
Jeff Kaiser, CH2M Hill  
Paul Bucholz, MDEQ





## Photographic Log

|  |                       |  |                                    |
|--|-----------------------|--|------------------------------------|
| <b>Client Name:</b><br>Weyerhaeuser Company                      |                       | <b>Site Location:</b><br>12 <sup>th</sup> Street Powerhouse Channel                  | <b>Project No.:</b><br>00-05131.04 |
| <b>Photo No.</b><br>1  | <b>Date</b><br>9/4/07 |   |                                    |
| <b>Description</b><br><br>Portadams prior to installing sheeting |                       |  |                                    |
| <b>Photo No.</b><br>2  | <b>Date</b><br>9/5/07 |  |                                    |
| <b>Description</b><br><br>Fabric Placement upstream              |                       |  |                                    |






## Photographic Log

|  |                |  |                             |
|--|----------------|--|-----------------------------|
| Client Name:<br>Weyerhaeuser Company                     |                | Site Location:<br>12 <sup>th</sup> Street Powerhouse Channel                         | Project No.:<br>00-05131.04 |
| Photo No.<br>3   | Date<br>9/5/07 |   |                             |
| Description<br><br>Placing sandbags on portadam upstream |                |  |                             |
| Photo No.<br>4   | Date<br>9/5/07 |  |                             |
| Description<br><br>Lay out curtain upstream              |                |  |                             |






## Photographic Log

| Client Name:                  |        | Site Location:  | Project No.: |
|-------------------------------|--------|---|--------------|
| Weyerhaeuser Company          |        | 12 <sup>th</sup> Street Powerhouse Channel  | 00-05131.04  |
| Photo No.                     | Date   |  |              |
| 5                             | 9/6/07 |   |              |
| Description                   |        |   |              |
| Portadam placement downstream |        |   |              |



  

|                                   |        |  |
|-----------------------------------|--------|--|
| Photo No.                         | Date   |  |
| 6                                 | 9/6/07 |  |
| Description                       |        |  |
| Place manhole for pumping channel |        |  |







## Photographic Log

|  |                |  |                             |
|--|----------------|--|-----------------------------|
| Client Name:<br>Weyerhaeuser Company                   |                | Site Location:<br>12 <sup>th</sup> Street Powerhouse Channel                         | Project No.:<br>00-05131.04 |
| Photo No.<br>7   | Date<br>9/6/07 |   |                             |
| Description<br><br>Pump set within manhole             |                |  |                             |
| Photo No.<br>8   | Date<br>9/6/07 |  |                             |
| Description<br><br>Remove material from peninsula area |                |  |                             |






## Photographic Log


|   |                       |  |                                    |
|---|-----------------------|--|------------------------------------|
| <b>Client Name:</b><br>Weyerhaeuser Company                           |                       | <b>Site Location:</b><br>12 <sup>th</sup> Street Powerhouse Channel                  | <b>Project No.:</b><br>00-05131.04 |
| <b>Photo No.</b><br>9   | <b>Date</b><br>9/7/07 |   |                                    |
| <b>Description</b><br>Peninsula area after excavation                 |                       |  |                                    |
| <b>Photo No.</b><br>10  | <b>Date</b><br>9/8/07 |  |                                    |
| <b>Description</b><br>Dissipation tank and secondary containment area |                       |  |                                    |





## Photographic Log

|  |                |   |                             |
|--|----------------|---|-----------------------------|
| Client Name:<br>Weyerhaeuser Company               |                | Site Location:<br>12 <sup>th</sup> Street Powerhouse Channel                        | Project No.:<br>00-05131.04 |
| Photo No.<br>11                                    | Date<br>9/8/07 |  |                             |
| Description<br><br>Material within containment pad |                |   |                             |

|  |                |  |  |
|--|----------------|--|--|
| Photo No.<br>12                              | Date<br>9/9/07 |  |  |
| Description<br><br>Bank area begin reshaping |                |  |  |



**Turbidity Data**  
**Powerhouse Channel - Plainwell, Michigan**

| Date<br>m/d/y | Time<br>hh:mm:ss | Turbidity - NTU |            | Comments   |
|---------------|------------------|-----------------|------------|--|
|               |                  | Upstream        | Downstream |  |
|               |                  | Hourly Avg      | Hourly Avg |  |
|               |                  |                 |            | Turbidity readings taken 8/22 to 8/24 at 15-minute intervals resulted in average turbidity of 16.0 upstream and 17.7 downstream. |
| 9/5/2007      | 12:45:40         | 4.6             | 0.9        |  |
| 9/5/2007      | 13:45:40         | 5.2             | 1.4        |  |
| 9/5/2007      | 14:45:40         | 4.6             | 2.8        |  |
| 9/5/2007      | 15:45:40         | 3.5             | 1.5        |  |
| 9/5/2007      | 16:45:40         | 2.9             | 0.4        |  |
| 9/5/2007      | 17:45:40         | 2.3             | 0.0        |  |
| 9/5/2007      | 18:45:40         | 2.1             | 0.0        |  |
| 9/5/2007      | 19:45:40         | 1.9             | 0.0        |  |
| 9/5/2007      | 20:45:40         | 2.0             | 0.0        |  |
| 9/5/2007      | 21:45:40         | 2.4             | 0.0        |  |
| 9/5/2007      | 22:45:40         | 2.8             | 0.0        |  |
| 9/5/2007      | 23:45:40         | 3.1             | 0.0        |  |
| 9/6/2007      | 0:45:40          | 3.1             | 0.0        |  |
| 9/6/2007      | 1:45:40          | 3.0             | 0.0        |  |
| 9/6/2007      | 2:45:40          | 3.1             | 0.0        |  |
| 9/6/2007      | 3:45:40          | 3.0             | 0.0        |  |
| 9/6/2007      | 4:45:40          | 3.5             | 0.0        |  |
| 9/6/2007      | 5:45:40          | 2.9             | 0.0        |  |
| 9/6/2007      | 6:45:40          | 3.1             | 0.0        |  |
| 9/6/2007      | 7:45:40          | 3.3             | 0.5        |  |
| 9/6/2007      | 8:45:40          | 2.4             | 0.0        |  |
| 9/6/2007      | 9:45:40          | 2.0             | 0.0        |  |
| 9/6/2007      | 10:45:40         | 1.6             | 0.0        | Begin slow pumping to seat Portadam curtains.  |
| 9/6/2007      | 11:45:40         | 1.3             | 0.0        |  |
| 9/6/2007      | 12:45:40         | 1.2             | 0.0        |  |
| 9/6/2007      | 13:45:40         | 0.7             | 0.0        |  |
| 9/6/2007      | 14:45:40         | 0.6             | 0.0        | Begin pumping to dewater at approximately 2,000 gpm.   |
| 9/6/2007      | 15:45:40         | 1.2             | 1.9        |  |
| 9/6/2007      | 16:45:40         | 1.1             | 0.0        |  |
| 9/6/2007      | 17:45:40         | 0.5             | 0.0        |  |
| 9/6/2007      | 18:45:40         | 0.4             | 0.0        |  |
| 9/6/2007      | 19:45:40         | 0.4             | 0.0        |  |
| 9/6/2007      | 20:45:40         | 0.6             | 0.0        |  |
| 9/6/2007      | 21:45:40         | 0.9             | 0.0        |  |
| 9/6/2007      | 22:45:40         | 1.3             | 0.0        |  |
| 9/6/2007      | 23:45:40         | 1.5             | 0.0        |  |
| 9/7/2007      | 0:45:40          | 1.8             | 0.0        |  |
| 9/7/2007      | 1:45:40          | 2.0             | 0.0        |  |
| 9/7/2007      | 2:45:40          | 2.0             | 0.0        |  |
| 9/7/2007      | 3:45:40          | 2.3             | 0.0        |  |
| 9/7/2007      | 4:45:40          | 2.3             | 0.0        |  |
| 9/7/2007      | 5:45:40          | 2.4             | 0.0        |  |
| 9/7/2007      | 6:45:40          | 2.5             | 0.0        |  |
| 9/7/2007      | 7:45:40          | 2.6             | 0.4        | Area pumped down begin to see turbidity within curtained area.   |
| 9/7/2007      | 8:45:40          | 2.0             | 10.7       |  |
| 9/7/2007      | 9:45:29          | 1.4             | 3.7        | Shut down pump.  |
| 9/7/2007      | 10:45:40         | 1.7             | 4.2        |  |
| 9/7/2007      | 11:45:40         | 1.8             | 5.1        |  |
| 9/7/2007      | 12:45:40         | 1.6             | 11.4       | Modify secondary containment area, level discharge box.  |
| 9/7/2007      | 13:45:40         | 1.8             | 0.2        | Increase in turbidity from working within containment area reanchoring sheet curtains.   |

**Turbidity Data**  
**Powerhouse Channel - Plainwell, Michigan**

| Date     | Time     | Turbidity - NTU |            | Comments   |
|----------|----------|-----------------|------------|--|
|          |          | Upstream        | Downstream |  |
| 9/7/2007 | 14:45:40 | 4.5             | 0.7        |  |
| 9/7/2007 | 15:45:40 | 3.5             | 4.3        |  |
| 9/7/2007 | 16:45:40 | 2.2             | 4.4        | Restart pump to maintain level.  |
| 9/7/2007 | 17:45:40 | 1.8             | 3.4        |  |
| 9/7/2007 | 18:45:40 | 3.1             | 3.5        |  |
| 9/7/2007 | 19:45:40 | 2.5             | 3.8        |  |
| 9/7/2007 | 20:45:40 | 2.3             | 3.4        |  |
| 9/7/2007 | 21:45:40 | 2.7             | 3.3        |  |
| 9/7/2007 | 22:45:40 | 3.3             | 3.7        |  |
| 9/7/2007 | 23:45:40 | 3.6             | 4.0        |  |
| 9/8/2007 | 0:45:40  | 3.8             | 4.3        |  |
| 9/8/2007 | 1:45:40  | 3.9             | 4.6        |  |
| 9/8/2007 | 2:45:40  | 4.1             | 4.8        |  |
| 9/8/2007 | 3:45:40  | 4.1             | 5.0        |  |
| 9/8/2007 | 4:45:40  | 4.4             | 5.0        |  |
| 9/8/2007 | 5:45:40  | 4.3             | 4.8        |  |
| 9/8/2007 | 6:45:40  | 4.4             | 11.4       | Resume pumping at 2,000 gpm.   |
| 9/8/2007 | 7:45:00  | 4.3             | 7.8        | Pump level closer to sediment interface beginning to create turbidity within silt curtain.                     |
| 9/8/2007 | 8:45:40  | 3.8             | 6.9        |  |
| 9/8/2007 | 9:45:40  | 3.2             | 12.0       |  |
| 9/8/2007 | 10:45:40 | 2.8             | 9.1        | Shut pump down @ 9:20.   |
| 9/8/2007 | 11:45:40 | 2.5             | 9.5        | Work on containment area to move curtains further from discharge box. Restart pump.                            |
| 9/8/2007 | 12:45:40 | 2.9             | 5.2        |  |
| 9/8/2007 | 13:45:40 | 1.8             | 10.4       | Shut down pump.  |
| 9/8/2007 | 14:45:40 | 2.6             | 3.0        | Modify discharge box. Clean out sediments, add drum to end of discharge to allow more uniform flow out of box. |
| 9/8/2007 | 15:45:40 | 2.1             | 5.5        | Restart pump and bring to full flow.   |
| 9/8/2007 | 16:45:40 | 1.5             | 3.8        |  |
| 9/8/2007 | 17:45:40 | 1.2             | 7.0        | Shut down pump @ 5:30.   |
| 9/8/2007 | 18:45:40 | 1.3             | 2.8        |  |
| 9/8/2007 | 19:45:40 | 1.7             | 5.1        |  |
| 9/8/2007 | 20:45:40 | 6.3             | 4.2        |  |
| 9/8/2007 | 21:45:40 | 3.8             | 4.7        |  |
| 9/8/2007 | 22:45:40 | 4.7             | 5.6        |  |
| 9/8/2007 | 23:45:40 | 5.3             | 6.2        |  |
| 9/9/2007 | 0:45:40  | 5.9             | 7.0        |  |
| 9/9/2007 | 1:45:40  | 6.4             | 7.5        |  |
| 9/9/2007 | 2:45:40  | 6.8             | 7.9        |  |
| 9/9/2007 | 3:45:40  | 7.0             | 8.4        |  |
| 9/9/2007 | 4:45:40  | 7.6             | 8.7        |  |
| 9/9/2007 | 5:45:40  | 8.1             | 9.0        |  |
| 9/9/2007 | 6:45:40  | 8.1             | 9.1        | Water up approximately 1 foot since yesterday.   |
| 9/9/2007 | 7:45:40  | 8.2             | 9.2        | Shut down pump and move intake.  |
| 9/9/2007 | 8:45:40  | 7.2             | 9.5        |  |
| 9/9/2007 | 9:45:40  | 6.3             | 8.0        | Restart pump @ 9:15, high turbidity.   |
| 9/9/2007 | 10:45:00 | 5.9             | 15.4       | Shut down, clean out culvert, and reset pump.  |
| 9/9/2007 | 11:45:40 | 5.5             | 9.8        |  |
| 9/9/2007 | 12:45:40 | 4.8             | 7.9        | Restart pump. Initial turbidity clearing up quickly.   |
| 9/9/2007 | 13:45:00 | 4.2             | 11.2       |  |
| 9/9/2007 | 14:45:00 | 4.1             | 4.9        | Shut down pump @ 2:00.   |



